

WHAT IS CLAIMED IS:

1. A method for generating an image, comprising:  
receiving light at a plurality of sensors, the light  
associated with a plurality of images;

5 repeating the following for each sensor of the  
plurality of sensors:

determining a previous matrix comprising image  
information associated with a previous image of the  
plurality of images;

10 generating current image data corresponding to  
a current image of the plurality of images; and

determining a current matrix using the previous  
matrix and the current image data, the current matrix  
comprising image information associated with the current  
15 image; and

computing a fusion matrix according to the current  
matrix of each sensor of the plurality of sensors, the  
fusion matrix operable to initiate generation of a fused  
image.

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2. The method of Claim 1, wherein determining a  
current matrix further comprises calculating a change  
matrix indicating a change associated with the previous  
matrix and the current image data.

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3. The method of Claim 1, wherein determining the  
current matrix further comprises determining a difference  
between the current image data and the previous matrix.

4. The method of Claim 1, wherein computing the fusion matrix further comprises computing the fusion matrix only if a change matrix indicates a change associated with a previous matrix and a current matrix.

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5. The method of Claim 1, wherein computing the fusion matrix further comprises computing the fusion matrix at a fusion processor, the fusion processor comprising a member of the group consisting of a neural net, a plurality of logic operators, a field programmable gate array (FPGA), one or more solid state circuits, and a hardware architecture.

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6. The method of Claim 1, further comprising generating a display matrix according to the fusion matrix, the display matrix operable to generate the fused image.

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7. The method of Claim 1, further comprising displaying the fused image generated in accordance with the fusion matrix.

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8. The method of Claim 1, further comprising processing each current matrix to enhance one or more components of each current matrix.

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9. The method of Claim 1, wherein each sensor of the plurality of sensors is associated with a particular wavelength range.

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10. A system for generating an image, comprising:  
a plurality of sensors operable to receive a light,  
the light associated with a plurality of images; and  
a processor coupled to the plurality of sensors and  
operable to:

repeat the following for each sensor of the  
plurality of sensors:

determine a previous matrix comprising  
image information associated with a previous image of the  
plurality of images;

generate current image data corresponding  
to a current image of the plurality of images; and

determine a current matrix using the  
previous matrix and the current image data, the current  
matrix comprising image information associated with the  
current image; and

compute a fusion matrix according to the  
current matrix of each sensor of the plurality of  
sensors, the fusion matrix operable to initiate  
generation of a fused image.

11. The system of Claim 10, the processor further  
operable to calculate a change matrix indicating a change  
associated with the previous matrix and the current image  
data.

12. The system of Claim 10, the processor further  
operable to determine a difference between the current  
image data and the previous matrix.

13. The system of Claim 10, the processor further operable to compute the fusion matrix only if a change matrix indicates a change associated with a previous matrix and a current matrix.

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14. The system of Claim 10, the processor further operable to compute the fusion matrix at a fusion processor, the fusion processor comprising a member of the group consisting of a neural net, a plurality of logic operators, a field programmable gate array (FPGA), one or more solid state circuits, and a hardware architecture.

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15. The system of Claim 10, the processor further operable to generate a display matrix according to the fusion matrix, the display matrix operable to generate the fused image.

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16. The system of Claim 10, further comprising a display coupled to the processor and operable to display the fused image generated in accordance with the fusion matrix.

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17. The system of Claim 10, the processor further operable to process each current matrix to enhance one or more components of each current matrix.

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18. The system of Claim 10, wherein each sensor of the plurality of sensors is associated with a particular wavelength range.

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19. A system for generating an image, comprising:  
means for receiving light at a plurality of sensors,  
the light associated with a plurality of images;  
means for repeating the following for each sensor of  
5 the plurality of sensors:  
determining a previous matrix comprising image  
information associated with a previous image of the  
plurality of images;  
generating current image data corresponding to  
10 a current image of the plurality of images; and  
determining a current matrix using the previous  
matrix and the current image data, the current matrix  
comprising image information associated with the current  
image; and  
15 means for computing a fusion matrix according to the  
current matrix of each sensor of the plurality of  
sensors, the fusion matrix operable to initiate  
generation of a fused image.

20. A method for generating an image, comprising:  
receiving a light at a plurality of sensors, the  
light associated with a plurality of images, each sensor  
of the plurality of sensors being associated with a  
5 particular wavelength range;  
repeating the following for each sensor of the  
plurality of sensors:  
determining a previous matrix comprising image  
information associated with a previous image of the  
10 plurality of images;  
generating current image data corresponding to  
a current image of the plurality of images;  
determining a current matrix using the previous  
matrix and the current image data, the current matrix  
15 comprising image information associated with the current  
image, the current matrix determined by:  
determining a difference between the  
current image data and the previous matrix; and  
calculating a change matrix using the  
20 difference; and  
processing each current matrix to enhance one  
or more components of each current matrix;  
computing a fusion matrix according to the current  
matrix of each sensor of the plurality of sensors by:  
25 computing the fusion matrix only if any change  
matrix indicates a change associated with a previous  
matrix and a current matrix; and

computing the fusion matrix at a fusion processor, the fusion processor comprising a member of the group consisting of a neural net, a plurality of logic operators, a field programmable gate array (FPGA),  
5 solid state circuits, and a hardware architecture, the fusion matrix operable to initiate generation of a fused image;

generating a display matrix according to the fusion matrix, the display matrix operable to generate the fused  
10 image; and

displaying the fused image generated in accordance with the fusion matrix.